

## I. INTRODUCTION

The California Department of Fish and Game (Department), as the Trustee Agency for the State of California's rich and diverse biological resources, has responsibility for periodic monitoring of those resources for the purpose of assuring their conservation for the benefit of the people of California. Monitoring involves assessing both the status of individual species as well as their habitats.

The South Coast Region (SCR) encompasses the five southern coastal counties of California (Santa Barbara, Ventura, Los Angeles, Orange and San Diego). This portion of the State is unique in several ways. First, it is an area that supports the highest diversity of species in the State. Second, because of the large human population and intense urbanization, more State and/or Federally-listed threatened or endangered species exist in the SCR than anywhere else in the State. Finally, the SCR has served as the proving ground for the Department's Natural Community Conservation Planning (NCCP) program, a program focused on regional multi-species conservation planning that also incorporates regional monitoring efforts.

This report is a summary of the monitoring and research-related activities conducted by the SCR Monitoring Team during 2002. Certain monitoring and research activities were conducted directly by the Monitoring Team, while others were contracted to outside experts, but under the oversight of the Monitoring Team. This report highlights and summarizes the results of the monitoring and research activities of 2002, but does not contain all of the raw data collected. If more information is desired about specific data sets, contact the SCR Monitoring Team at the SCR Regional Office in San Diego.

### A. Monitoring Team Vision Statement

The SCR Monitoring Team created a vision statement to guide the implementation of the regional monitoring program:

The SCR Monitoring Team seeks to conduct a biological monitoring and research program that identifies regionally sensitive species and habitats, and seeks appropriate measures for their conservation. The monitoring program is:

- Science-based in data collection and analysis;
- Region-wide in scope;
- Balanced between ecosystem monitoring and single-species monitoring;
- Supportive of research;
- Practical, in terms of providing sound information upon which to make land management decisions;

- Providing information useful for public outreach and education programs;
- Contributing to the implementation of regional conservation plans (NCCP, Habitat Conservation Plan (HCP)), and statewide conservation goals;
- Providing expertise in the development of monitoring plans for regional conservation plans as well as Department lands in the region;
- Partnering with other parties involved in biological monitoring to coordinate collection and sharing of information.

#### B. SCR Monitoring Team

The SCR Monitoring Team is part of the Land Management and Monitoring Program and is supervised by Ms. Terri Stewart, Senior Biologist Supervisor. It is composed of four members, with additional Department staff assisting in monitoring-related activities as workload allows. The individual team members, along with their areas of expertise and responsibility, are:

- Lyann Comrack – Associate Biologist (Wildlife) – birds, threatened and endangered and “Special Concern” birds and mammals, Bird Species of Special Concern project management
- Tim Hovey – Associate Biologist (Fisheries) – threatened and endangered and “Special Concern” fishes, amphibians and reptiles
- David Lawhead – Associate Biologist (Wildlife)- NCCP, mammals
- Dan Marschalek – Scientific Aide – terrestrial invertebrates

The team is assisted by Meredith Osborne, Associate Biologist (Botany), Habitat Conservation Division, for sensitive plant issues and John Ekhoﬀ, Associate Biologist (Botany), Land Management and Monitoring Program, for exotic species issues.

#### C. Goals and Requirements

##### 1. Species (Fish and Game Code § 2052, 2055)

SCR assumed primary responsibility for coordinating the Department’s comprehensive monitoring, research and recovery program for select endangered, threatened, rare and otherwise “sensitive” plant and animal species in January 2000. By arrangement with the Habitat Conservation Planning Branch, species that occur wholly or primarily within regional boundaries (Table 1) are monitored by SCR. SCR biologists participate in recovery planning for species listed under the California Endangered Species Act (CESA) and the federal Endangered Species Act (ESA) through membership on formal recovery teams (Pacific pocket mouse) or

on informal working groups (island fox, San Clemente Island loggerhead shrike, least Bell's vireo, California least tern, Western snowy plover). SCR biologists compile and distribute biological and status information on more wide ranging species, focusing attention on sensitive species of plants and animals. Also, SCR develops and approves research memoranda of understanding (MOUs) for these species.

**Table 1.** Sensitive Species – South Coast Region Lead Responsibilities

Common Name	Scientific Name	Status	Contact
<b>Mammals</b>			
So. California Saltmarsh Shrew	<i>Sorex ornatus salicornicus</i>	SSC	Comrack
Santa Catalina Island Shrew	<i>Sorex ornatus willetti</i>	SSC	Comrack
Pacific Pocket Mouse	<i>Perognathus longimembris pacificus</i>	FE, SSC	Lawhead
Southern Grasshopper Mouse	<i>Onychomys torridus ramona</i>	SSC	Comrack
Island Fox	<i>Urocyon littoralis</i>	ST, FPE	Comrack
<b>Birds</b>			
Light-footed Clapper Rail	<i>Rallus longirostris levipes</i>	SE, FE, FP	Comrack
California Least Tern	<i>Sterna antillarum browni</i>	SE, FE, FP	Comrack
San Clemente Loggerhead Shrike	<i>Lanius ludovicianus mearnsi</i>	FE, SSC	Comrack
Belding's Savannah Sparrow	<i>Passerculus sandwichensis beldingi</i>	SE	Comrack
<b>Reptiles</b>			
Southwestern Pond Turtle	<i>Clemmys marmorata</i>	SSC	Hovey
Coast Horned Lizard	<i>Phrynosoma coronatum spp.</i>	SSC	Hovey
Gilbert Skink	<i>Eumeces gilberti</i>		Hovey
Orange-throated Whiptail	<i>Cnemidophorus hyperythrus</i>	SSC	Hovey
Silvery Legless Lizard	<i>Anniella pulchra</i>	SSC	Hovey
San Bernardino Mountain Kingsnake	<i>Lampropeltis zonata parvirubra</i>	SSC	Hovey
San Diego Mountain Kingsnake	<i>Lampropeltis zonata pulchra</i>	SSC	Hovey
San Diego Gopher Snake	<i>Pituophis melanoleucus</i>		Hovey
Coast Patch-nosed Snake	<i>Salvadora hexalepis virgultea</i>	SSC	Hovey
Two-striped Garter Snake	<i>Thamnophis hammondi</i>	SSC	Hovey
No. Red Diamond Rattlesnake	<i>Crotalus ruber</i>		Hovey
<b>Amphibians</b>			
California Newt	<i>Taricha torosa</i>	SSC	Hovey
Yellow-blotched Salamander	<i>Ensatina eschscholtzi</i>	SSC	Hovey
Tiger Salamander	<i>Ambystoma tigrinum</i>	FE, SSC	Hovey
Western Spadefoot Toad	<i>Spea (Scaphiopus) hammondi</i>	SSC	Hovey
Arroyo Toad	<i>Bufo californicus</i>	FE, SSC	Hovey
Mountain Yellow-legged Frog	<i>Rana muscosa</i>	FE, SSC	Hovey
California Red-legged frog	<i>Rana aurora</i>	FT, SSC	Hovey
<b>Fish</b>			
Arroyo Chub	<i>Gila orcutti</i>	SSC	Hovey
Santa Ana Speckled Dace	<i>Rhinichthys osculus</i>	SSC	Hovey
Santa Ana Sucker	<i>Catostomus santaanae</i>	FT, SSC	Hovey
Unarmored Threespine Stickleback	<i>Gasterosteus aculeatus williamsoni</i>	FE, SE, FP	Hovey
Tidewater Goby	<i>Eucyclogobius newberryi</i>	FE, SSC	Hovey

Southern Steelhead Trout	<i>Oncorhynchus mykiss</i>	FE, SSC	Hovey
<b>Invertebrates</b>			
All sensitive species in SCR			Hovey/ Marschalek

Status key: FE = Federal endangered, FT = Federal threatened, FPE = Federal proposed endangered, SE = State endangered, ST = State threatened, SSC = Species of Special Concern, FP = State fully protected.

## 2. NCCP (Fish and Game Code § 2800-2840)

NCCP plans require that monitoring programs be established to assure: 1) compliance with the requirements of the plan, 2) effectiveness of the plan in conserving the biological resources the plan proposed to conserve, and 3) information is provided to an adaptive management program. The SCR monitoring program is focused primarily on the latter two items, although the first item also plays a role in the program for certain Department lands included within the NCCP preserve system. Data are collected by all NCCP plan participants on NCCP preserve lands under their jurisdiction to assess the overall effectiveness of the NCCP plan. The SCR Monitoring Team monitors Department Ecological Reserves and Wildlife Areas within NCCP planning areas to assess biological condition, management needs, and management effectiveness on those lands.

## 3. Coordination and Collaboration

The SCR Monitoring Team coordinates with a number of other agencies, universities and non-profit groups in the course of its monitoring activities. In some cases Monitoring Team personnel engage in joint field monitoring efforts (e.g., red-legged frog surveys with U.S. Geological Survey (USGS)), while in other cases the team oversees contracted monitoring or research work carried out by one of our partners. In addition, the Monitoring Team works closely with the U. S. Fish and Wildlife Service (USFWS), USGS – Biological Resources Division, and local jurisdictions to develop regional monitoring plans under the NCCP program. Other partners in 2002 include: San Diego State University, U.S. Forest Service, Bureau of Land Management, Conservation Biology Institute, San Diego Natural History Museum, Wildlife Research Institute, San Diego Tracking Team, Institute for Wildlife Studies, and Point Reyes Bird Observatory.

## II. SPECIES

Species listed as rare, threatened, or endangered under state and/or federal law, and those taxa considered to be Species of Special Concern or included on the California Native Plant Society's Inventory of Rare and Endangered Plants in California, are given highest priority for monitoring, research and management by the SCR. Highlights from the SCR monitoring program for select species are summarized below.